

**What is claim d is:**

1. A combination hood microwave oven comprising:

a cabinet disposed over an oven range;

5 a cooking room having a predetermined cavity within the cabinet for cooking using an electromagnetic wave generated from a magnetron;

a hood unit installed within the cabinet to discharge polluted air produced from the oven range on cooking; and

10 an air curtain generating unit installed at a bottom side of the cabinet to prevent the polluted air from diffusing into a room.

2. The combination hood microwave oven of claim 1, the air curtain generating unit comprising:

a blowing fan rotatably provided to a front bottom side of the cabinet;

15 a drive motor rotating the blowing fan; and

a fan housing formed at the front bottom side of the cabinet to hold the blowing fan therein and having an intake opening for inhaling air and an outflow opening for exhaling air to form an air curtain.

20 3. The combination hood microwave oven of claim 2, wherein the blowing fan is a crossflow fan having a configuration that the air is inhaled and exhaled in a circumferential direction when the fan is rotated by the drive motor.

4. The combination hood microwave oven of claim 2, wherein the fan housing is formed at the front bottom side of the cabinet in a length direction, the intake opening faces a front side of the microwave oven, and the outflow opening inclines to a lower direction of the microwave oven to have a predetermined incline angle so that the air forming the air curtain is injected toward an upper front side of the oven range.

5. The combination hood microwave oven of claim 1, the air curtain generating unit comprising:

a front air curtain generating unit installed at the front bottom side of the cabinet to form a front air curtain inclining to a front lower side of the cabinet;

a left air curtain generating unit installed at a left bottom side of the cabinet to form a left air curtain inclining to a left lower side of the cabinet; and

a right air curtain generating unit installed at a right bottom side of the cabinet to form a right air curtain inclining to a right lower side of the cabinet.

6. The combination hood microwave oven of claim 5, each of the front, right, and left air curtain generating units, comprising:

a blowing fan rotatably installed at the corresponding bottom side of the cabinet;

a drive motor driving the corresponding blowing fan; and

a fan housing formed at corresponding bottom side of the cabinet to hold the corresponding blowing fan therein and having an intake opening for inhaling air and an outflow opening for exhaling the air to form the corresponding air curtain.

7. The combination hood microwave oven of claim 6, wherein a plurality of the blowing fans are rotatably connected to be driven by one drive motor.

8. The combination hood microwave oven of claim 1, the air curtain  
5 generating unit comprising:

a front air curtain generating unit installed at the front bottom side of the cabinet to form a front air curtain inclining to a front lower side of the cabinet; and

a left air curtain generating unit installed at a left bottom side of the cabinet to form a left air curtain inclining to a left lower side of the cabinet.

10

9. The combination hood microwave oven of claim 1, the air curtain generating unit comprising:

a front air curtain generating unit installed at the front bottom side of the cabinet to form a front air curtain inclining to a front lower side of the cabinet; and

15 a right air curtain generating unit installed at a right bottom side of the cabinet to form a right air curtain inclining to a right lower side of the cabinet.

10. The combination hood microwave oven of claim 1, the air curtain generating unit comprising:

20 a sliding plate provided to the bottom side of the cabinet to slide out in front of the cabinet to a predetermined displacement;

a crossflow fan rotatably installed at a front side of the sliding plate to form an air curtain by inhaling/exhaling air; and

a drive motor rotating the crossflow fan.

11. The combination hood microwave oven of claim 10, wherein  
guide grooves are formed at the bottom side of the cabinet to have the sliding plate  
slide to move, a fan housing 90 having an intake opening and an outflow opening is  
provided to the front side of the sliding plate, and the crossflow fan is rotatably loaded in  
the fan housing.

12. The combination hood microwave oven of claim 10, wherein the sliding  
plate is provided to each of front, right, and left sides of the cabinet.